In the Claims:

1-17 (Previously Canceled)

18. (Currently Amended): An apparatus that optimizes the development of woven fabrics, comprising:

a display device that displays the woven fabrics that are developed in the apparatus,

a structure input device that inputs freely definable fabric structures for woven fabrics,

at least one measuring device for measuring individual yarn diameters, and

a control and evaluation device that controls the at least one measuring device and the woven fabrics using a serial interface,

and a ~~serial/~~parallel interface between the measuring device and the control and evaluation device,

wherein the structure input device enables inputting and changing the woven fabrics, and

wherein an actual fabric is computed and presented on the basis of the individual yarn diameters and the freely definable structures for woven fabrics,

whereby a defined structure of the fabric is changeable to adapt and optimize the actual fabric to the measured individual yarn diameters.

19. (Previously presented) The apparatus according to claim 18, wherein the at least one measuring device comprises an optoelectronic device.

PAGE 4/12 * RCVD AT 3/5/2005 1:31:18 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/0 * DNIS:8729308 * CSID:5053230865 * DURATION (mm-ss):04-20

20. (Previously presented) The apparatus according to claim 19, wherein the optoelectronic device comprises a measuring device that carries out absolute measurements and operates in an infrared range.

21. (Previously presented) The apparatus according to claim 18, wherein the measuring device has an accuracy of at least 1/100 mm.

22. (Previously presented) The apparatus according to claim 18, wherein the defined structure of the actual fabric is graphically represented.

23. (Previously presented) The apparatus according to claim 18, wherein each structure is defined by a two dimensional matrix.

24. (Previously Presented) The apparatus according to claim 22, wherein the computed actual fabric is represented on a screen.

25. (Previously presented) The apparatus according to claim 24, wherein a representation of the computed actual fabric comprises parallel projection of an object by via a three dimensional graphics library.

26. (Previously presented) The apparatus according to claim 18, comprising an output device comprising a color printer or a color copier.

27. (Cancelled)

28. (Previously presented) The apparatus according to claim 18, wherein the at least one measuring device comprises a plurality of measuring heads or measuring devices.

29. (Previously presented) The apparatus according to claim 18, wherein a fabric density is set.

PAGE 5/12 * RCVD AT 3/5/2005 1:31:18 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/0 * DNIS:8729306 * CSID:5053230865 * DURATION (mm-ss):04-20

30. (Previously presented) The apparatus according to claim 18, wherein for knitted fabrics, a computation takes place in the control and evaluation device on the basis of measured yarn data.

31. (Previously presented) The apparatus according to claim 18, further comprising a statistical evaluation device that statistically evaluates measured yarn data.

32. (Previously presented) The apparatus according to claim 18, whereby the structure input device alters or creates flat fabric structures.

33. (Previously presented) The apparatus according to claim 18, wherein the structure input device and the control and evaluation device comprise a computer.

34. (Currently Amended) A method for development of fabrics that optimizes a development of actual woven fabric on the basis of measured yarn data using an apparatus having a display device,

said method comprising the steps of:

measuring individual yarn diameters,

inputting one or more woven fabrics employing a ~~serial/~~parallel interface for inputting the measured individual yarn diameters, using a serial interface,

computing and representing an actual woven fabric on the basis of the measured yarn diameters and freely definable woven fabrics, and

changing the actual woven fabrics so that the actual fabrics are adapted and optimized to the measured individual yarn diameters and the one or more inputted woven fabrics.

PAGE 6/12 * RCVD AT 3/5/2005 1:31:18 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/0 * DNIS:8729306 * CSID:5053230865 * DURATION (mm-ss):04-20